APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,325	01/16/2004	John E. Paff	MSFT-2912/305777.2	8370

41505 7590 06/25/2007	EXAMINER	
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)	LEE, CHUN KUAN	
CIRA CENTRE, 12TH FLOOR		
2929 ARCH STREET	ART UNIT	PAPER NUMBER
PHILADELPHIA, PA 19104-2891	2181	

MAIL DATE	DELIVERY MODE
06/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 January 2004_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-29_ is/are pending in the application.

    4a) Of the above claim(s) _4-9, 15, 21-22 and 24-29_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3, 10-14, 16-20 and 23_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _16 January 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

I. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

1.   The applicant's oath/declaration has been reviewed by the examiner and is found

to conform to the requirements prescribed in **37 C.F.R. 1.63.**

II. INFORMATION CONCERNING DRAWINGS

Drawings

2.   The applicant's drawings submitted are acceptable for examination purposes.

III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

3.   As required by **M.P.E.P. 609(C)**, the applicant's submissions of the Information

Disclosure Statement dated January 16, 2004 is acknowledged by the examiner and the

cited references have been considered in the examination of the claims now pending.

As required by **M.P.E.P 609 C(2)**, a copy of the PTOL-1449 initialed and dated by the

examiner is attached to the instant office action.

IV. ELECTION/RESTRICTIONS

4.   This application contains claims directed to the following patentably distinct

species:

Species I: claims 1-3, 10-14, 16-20 and 23 are directed toward the transferring of datum utilizing a side band between a first component and a second component.

Species II: claim 4 is directed toward the transferring of datum utilizing a side band between a computing device and an adapter card.

Species III: claims 5-6 are directed toward the transferring of datum utilizing a side band over an infrared connection.

Species IV: claims 7-8 are directed toward the transferring of datum utilizing a side band over a wired connection.

Species V: claim 9 is directed toward the transferring of datum utilizing a side band between a computing device and a local area network or wire area network.

Species VI: claims 15, 21-22 and 24-29 are directed toward the transferring of datum utilizing a side band between via a dock.

5.   Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 1, 10 and 17 are generic.

Applicant is advised that a reply to this requirement must include an identification

of the species that is elected consonant with this requirement, and a listing of all claims

readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless

accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration

of claims to additional species which depend from or otherwise require all the limitations

of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after

the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

6.   During a telephone conversation with Attorney Steven Rocci (Reg. # 30,489) on

06/12/2007 a provisional election was made without traverse to prosecute the invention

of Species I, claims 1-3, 10-14, 16-20 and 23. Affirmation of this election must be made

by applicant in replying to this Office action. Claims 4-9, 15, 21-22 and 24-29 withdrawn

from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-

elected invention.

V. REJECTIONS BASED ON 35 U.S.C. 101

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

7.   Claims 17-20 and 13 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

As per claim 17, the claim is directed towards to computer readable medium, and

in accordance to the specification, the computer readable medium can be a

communication media, such as a carrier wave or a wireless media such as acoustic,

RF, infrared and other wireless media (Specification, [0023]), wherein the carrier wave

or the wireless media are non-statutory subject matter.

Claims 18-20 and 23 are reject at least due to direct dependency on the rejected

independent claim 17.

VI. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-3, 10-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Kumar et al. (US

Patent 7,065,597).

9.   As per claims 1 and 10, AAPA teaches a system and a method comprising:

a first component (Specification, [0003]);

a second component communicatively connected to said first component through

a bus, said bus being accessible to components other than said first component and

said second component (Specification, [0003]); and

transferring of a data including a public/private key and encrypted information

between the first component and the second component via the bus (Specification,

[0003]-[0004]), therefore a first communication channel that include the bus would need

to be established in order to communicate (i.e. transfer) the data.

AAPA does not teach the system and the method comprising:

establishing a second communication channel that communicatively connects

said first component with said second component, wherein the second communication

channel does not transmit information through the bus; and

said second communication channel enabling the transmission of the datum in at

least one direction between said first component and said second component without

exposing said datum to said bus.

Kumar teaches a system and a method comprising:

establishing a first communication link (bus 110 of Fig. 1) and a second

communication link (side-band 114 of Fig. 1) between a processor (Fig. 1,ref. 102) and

a bridge (Fig. 1, ref. 114) (col. 1, ll. 26-48), wherein the transferring of data between the

processor and the bridge utilizing the second communication would not be exposed the

data to the first communication link.

Kumar is analogous art because Kumar is in the field of applicant's endeavor,

which is associated with the communication of two components within the computer

system wherein the two components connected to each other via a bus which is shared with other components; additionally, <u>Kumar</u>'s side-band is reasonably pertinent to the particular problem with which the applicant was concerned, because it enables the applicant to transfer data without utilizing the commonly shared bus.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include <u>Kumar</u>'s second communication link into <u>AAPA</u>'s system and method. The resulting combination of the references further teaches the system and the method comprising:

establishing the side-band (e.g. second communication channel) that connects the first component with the second component, wherein the said-band would obviously not be utilized for the transferring of encrypted information, because the encrypted information can only be properly received by the component with the corresponding public/private key, therefore it would be obvious that the encrypted information are transferred via the bus;

wherein the side-band enable would obvious be utilized for the transferring of the public/private key, therefore ensuring that only the destined component will be able receive the public/private key for decryption of the received encrypted information; and

the side-band enable the transferring of datum (e.g. public/private key) between the first component and the second component without exposing the datum to the bus.

The suggestion/motivation for doing so would have been for the benefit of implementing hot plugging function within the computer system (col. 1, ll. 24-25).

Therefore, it would have been obvious to combine <u>Kumar</u> with <u>AAPA</u> for the benefit of implementing hot plugging function within the computer system to obtain the invention as specified in claims 1 and 10.

10.   As per claims 2 and 13, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claims 1 and 10 as discussed above, where both further teach the system and the method comprising wherein the second component is associated with an identifier of the second component, and said datum comprises said identifier, said datum being transmitted from said second component to said first component over said second communication channel (<u>AAPA</u>, Specification, [0004] and <u>Kumar</u>, Fig. 1, ref. 114).

11.   As per claims 3 and 14, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claims 1 and 10 as discussed above, where <u>AAPA</u> further teaches the system and the method comprising wherein said identifier comprises a cryptographic key (e.g. public/private key) associated with the second component, wherein said cryptographic key being used to encrypt data that said first component sends to said second component (<u>AAPA</u>, Specification, [0004]).

12.   As per claim 11, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claim 10 as discussed above, where <u>Kumar</u> further teaches the method comprising wherein said second communication channel enables transmission of said datum between said first component and said second component only when said first component is within a level

of physical proximity (e.g. located within the same case) to said second component

(Kumar, col. 1, II. 49-54).

13.   As per claim 12, AAPA and Kumar teach all the limitations of claim 11 as

discussed above, where Kumar further teaches the method comprising wherein the first

component is a computer having an outer case, and wherein the second communication

channel enables transmission of said datum between said first component and said

second component only when said second component is at least as close to said first

component as being located inside of said outer case (Kumar, col. 1, II. 49-54).

14.   As per claim 16, AAPA and Kumar teach all the limitations of claim 10 as

discussed above, where both further teaches the system comprising wherein said first

component and said second component engage in communication according to a

protocol over said second communication channel to establish the respective identities

(e.g. utilizing the public/private key) and current presence of said first component and

said second component and to establish that said first component and said second

component are within a level of proximity to each other (e.g. located within the same

case) (AAPA, Specification, [0004] and Kumar, col. 1, II. 49-54), wherein it would have

been obvious that the side-band (e.g. second communication channel) is conformed to

the protocol in order to enable to the functionality of hot plugging or secure

communication utilizing public/private key.

15.   As per claim 17, AAPA teaches a computer-readable medium encoded with

computer-executable instructions to perform a method, the first component and the

second component being communicatively connected to each other by a bus that is

accessible to sources remote from the first component and the second component

(Specification, [0003]), the method comprising:

        sending a first datum (e.g. public/private key) from the first component to the

second component (Specification, [0004]); and

        receiving a second datum (e.g. encrypted information) at the first component

from the second component, the second datum being communicated from the second

component to the first component through the bus (Specification, [0004]).

        AAPA does not teach the method comprising

        wherein the transferring of the second datum is accomplished via a

communication channel and without use of the bus; and

        determining that the second component satisfies the first position relationship

based on receipt of the second datum.

        Kumar teaches a system and a method comprising:

        establishing a first communication link (bus 110 of Fig. 1) and a second

communication link (side-band 114 of Fig. 1) between a processor (Fig. 1,ref. 102) and

a bridge (Fig. 1, ref. 114) (col. 1, ll. 26-48), wherein the transferring of data between the

processor and the bridge utilizing the second communication would not be exposed the

data to the first communication link; and

wherein the processor and the bridge are located within the same case and are connected by a wire (col. 1, ll. 49-54).

Kumar is analogous art because Kumar is in the field of applicant's endeavor, which is associated with the communication of two components within the computer system wherein the two components connected to each other via a bus which is shared with other components; additionally, Kumar's side-band is reasonably pertinent to the particular problem with which the applicant was concerned, because it enables the applicant to transfer data without utilizing the commonly shared bus.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Kumar's second communication link into AAPA's system and method. The resulting combination of the references further teaches the computer-readable medium with the method of verifying that the first component is within the first positional relationship to the second component comprising:

wherein the second datum is transferring via the side-band, without exposing the second datum to the bus; and

as both the bridge (e.g. second component) and the processor (e.g. first component) are located within the same case and connected by a wire, when the second datum (e.g. encrypted information) is successfully received from the bridge, it would have been obvious that the bridge satisfying the first position relationship based on receipt of the second datum is determined.

The suggestion/motivation for doing so would have been for the benefit of implementing hot plugging function within the computer system (col. 1, ll. 24-25).

Therefore, it would have been obvious to combine <u>Kumar</u> with <u>AAPA</u> for the benefit of implementing hot plugging function within the computer system to obtain the invention as specified in claim 17.

16.   As per claim 18, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claim 17 as discussed above, where <u>AAPA</u> further teaches the computer-readable medium comprising wherein said first datum comprises a cryptographic key (e.g. public/private key) associated with the first component (<u>AAPA</u>, Specification, [0003]).

17.   As per claim 19, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claim 17 as discussed above, where <u>Kumar</u> further teaches the computer-readable medium comprising wherein the first positional relationship comprises the first component and the second component being within a level of proximity to each other (e.g. located within the same case) (<u>Kumar</u>, col. 1, ll. 49-54).

18.   As per claim 20, <u>AAPA</u> and <u>Kumar</u> teach all the limitations of claim 17 as discussed above, where <u>Kumar</u> further teaches the computer-readable medium comprising wherein the first component comprises a computing device (<u>Kumar</u>, Fig. 1, ref. 100) enclosed by a case, and wherein the first positional relationship comprises said second component being located within said case (<u>Kumar</u>, col. 1, ll. 49-54).

19.   Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in

view of Kumar et al. (US Patent 7,065,597) as applied to claim 17 above, and further in

view of Scott et al. (US Patent 5,311,596).

AAPA and Kumar teach all the limitations of claim 17 as discussed above, but

they do not teach the computer-readable medium comprising wherein said sending act

and said receiving act together comprises a challenge-response protocol, and wherein

the method further comprises: determining, based on said sending act and said

receiving act that the second component is engaging in a live communication with the

first component over said communication channel and that the second component is not

being emulated through a replay attack.

Scott teaches a system and a method comprising utilizing the challenge-

response protocol for communication between a terminal (Fig. 1, ref. 110) and a

computer (Fig. 1, ref. 150), wherein the authentication of the communication is

continuously re-affirmed, by continuous re-affirmation of identity, therefore ensuring the

authenticity of the communication, such that that there can no "spoofing" or active wire

taping within the communication (col. 1, l. 31 to col. 3, l. 16).

Scott is analogous art because Scott is reasonably pertinent to the particular

problem with which the applicant was concerned, which is to ensure the authenticity of

the communication link between two components, wherein the communication link is

shared with other components.

It would have been obvious to one of ordinary skill in this art, at the time of

invention was made to include Scott's continuously re-affirmed into AAPA and Kumar's

computer-readable medium. The resulting combination of the references further teaches computer-readable medium comprising wherein the sending and the receiving of data together include the challenge-response protocol; and as the communication between the terminal and the computer is ensured to be continuously authenticated via continuously re-affirmation of identity, it would then be obvious that the live communication between the first component and the second component over the side band (e.g. communication channel) is not being emulated through a reply attack, as there can no "spoofing" or active wire taping within the communication.

The suggestion/motivation for doing so would have been for the benefit of implementing a secure communication link by implementing a continuous re-authentication procedure in a non-interfering matter by utilizing a side-channel (Scott, col. 2, II. 41-42).

Therefore, it would have been obvious to combine Scott with AAPA and Kumar for the benefit of implementing a secure communication link by implementing a continuous re-authentication procedure in a non-interfering matter by utilizing a side-channel to obtain the invention as specified in claim 23.

VII. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the

application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

Per the instant office action, claims 1-3, 10-14, 16-20 and 23 have received a first

action on the merits and are subject of a first action non-final.

b. DIRECTION OF FUTURE CORRESPONDENCES

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is

(571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

IMPORTANT NOTE

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 15, 2007   Chun-Kuan (Mike) Lee
                                                 Examiner
                                                 Art Unit 2181

                                                 DONALD SPARKS
                                                 SUPERVISORY PATENT EXAMINER